

Online Services in the Age of the Internet: Interactive Services

Brewster Kahle

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Key West, Florida

Conventional Wisdom

- Internet will drive commercial services out of business
- Consumers are flocking to the Internet
- Advertisers will follow consumers
- Consumers will pay for ala carte services
- Commercial services don't "get it" and are closed and proprietary
- Everyone will make money on the Web
- Presumption of victory to Microsoft and Netscape

AOL and Web: Compare and Contrast

America Online

- It's about consumers...
- It's about lower bandwidths..
- It's about one price billed to consumer...
- It's about programming...
- It's about advertising
- It's about community...
- It's about prime time...

The Web

- It's about enterprises...
- It's about higher speed networks...
- It's about pay per view ala carte pricing...
- It's about "hunter gatherers" ...
- It's about advertising...
- It's about going "place to place" ...
- It's about day time...

Compare and Contrast...

America Online

- It's more and more about families and women...
- It's about packaging...
- It's about creating a new mass medium...
- It's here now

The Web

- It's mostly about men...
- It's about Netscape "Roll Your Own" ...
- It's about enabling groups to communicate
- It's here now

Consumer Factoids

- **Online Services market in 1994: \$800 million**
- **\$2 billion by 1997**
- **PC's in a third of all US homes**
- **50% of PC's now have modems**
- **30% of PC's outfitted with CD-ROM**
- **More PC's shipping into homes than televisions**

AOL Update

- From less than 1 million members to more than 3.5 million members
- Q4 revenues will be more than three times those of prior year
- From \$100 million revenues, to more than \$370 million
- Approaching \$1 billion in revenues in fiscal 1996
- From 350 employees to more than 2,500

Operations Issues for AOL

- Scalability:
 - tripled last year
 - 4 million email messages/day
 - e.g. gopher/wais gateway is 13 machines, email gateway is several...
- Reliability: machines, network, software
- Conservative in implementation

Internet Runs Wild

- Democratic: By and for the people
- No one owns it
- Its exciting and accessible
- (but we don't have a business model yet)

Internet Evolution on Steroids

1990 Messaging (email, netnews)

But we wanted searchable archives . . .

1991 DB Systems (WAIS)

But we wanted browsing. . .

1992 Browsing + DB (Gopher)

But we wanted richer documents. . .

1993 Hypertext + DB (WWW)

But we wanted programmable Interface . . .

1995 Mobile Code (Java?)

But we wanted . .

Convergence to What?

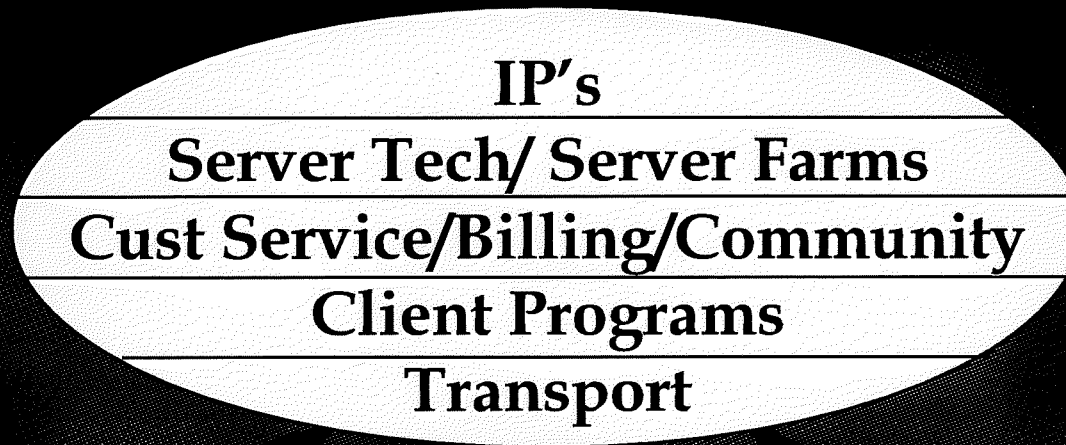
?

Online Services

Internet

Browsers
Audio Servers
PPP/SLIP
HTML Editors
3D Environments
Mobile Code
Access Providers

Interactive Services



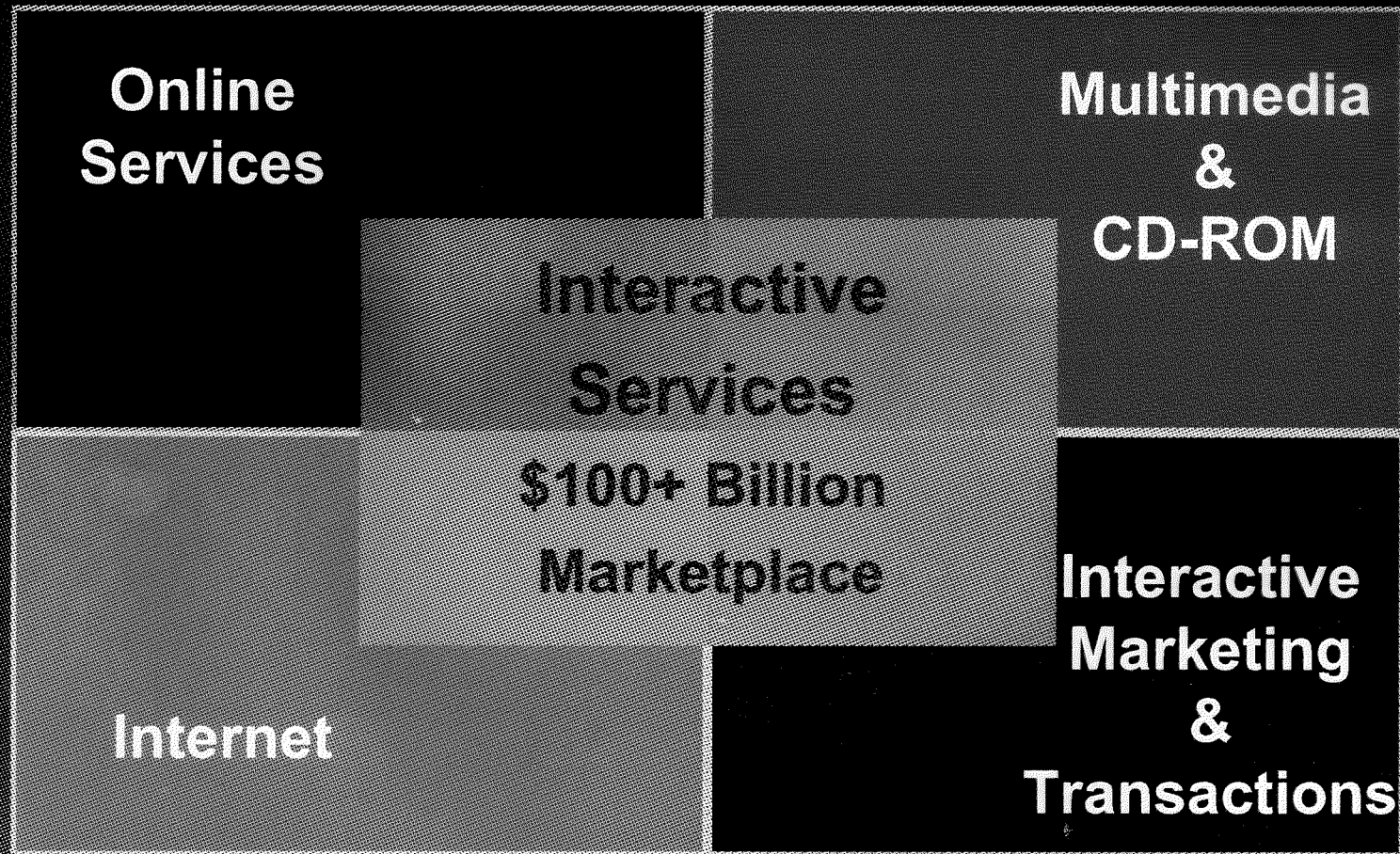
Consumer Focused
Vertically Integrated

Enterprise Focused
Horizontal Industry

Online Services

Internet Technologies

The Opportunity



Possible Company Divisions in Interactive Services

Content Creators

Server Tech +
Server Farm

Customer Service
Community
Billing
"Programming"

Raw Networks

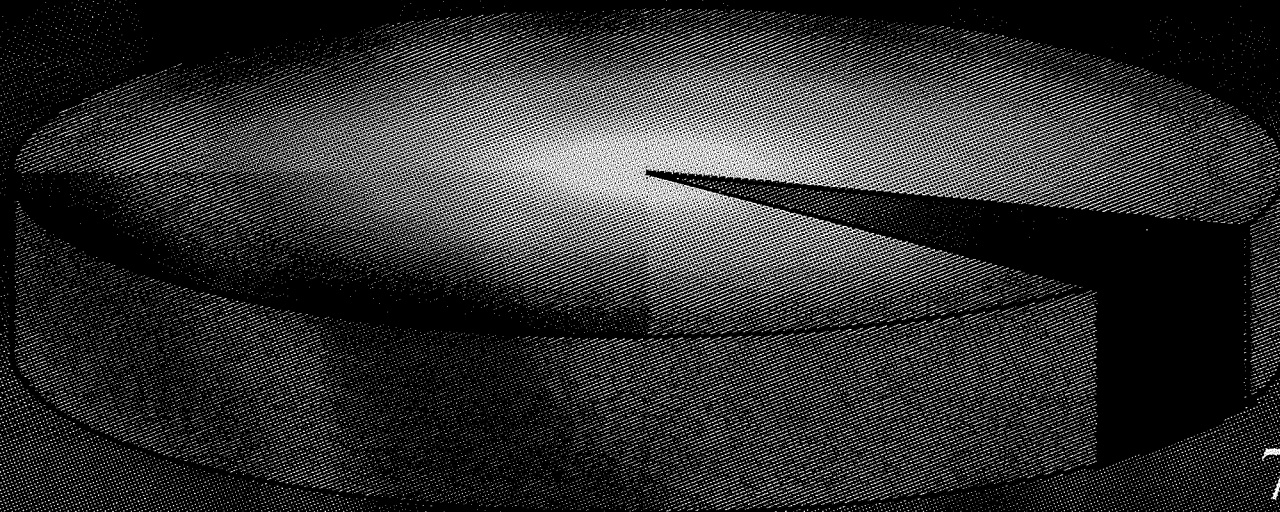
Client Software

Hurdles to come

- Learning to work together:
 - Sharing money
 - Interoperating systems
- Microsoft still wants dominance
- Achieving an integrated and useful system

AOL Focus is on 93% of HouseHolds Not Using Online Services

Significant Growth Lies Ahead



7% with Online Services

CAGR of:	Online Services	Home Video	Daily Newspapers	Magazines	Video Games	Home Shopping
1985-94	29%	16%	3%	5%	14%	50%

Internet Focus

- Useful systems for the workplace
- Better technologies for Community / Messages (Chat, email, bboards)
- Standards processes are too slow and painful
- Build a sustainable business model

Internet Problems: Structural

- Technology stream, but no revenue stream
- Standards process needs help:
 - Reference implementations
 - Better structured system: committees?
- Lack realtime networking
- Point-to-point system
 - Except dns, routing, multicast

Internet Infrastructure Needs

- **Speed: Caching?**
 - Log info for billing/advertising to owner
 - Control of distribution
 - Timely changes of data
- **Reliability: Backup servers?**
 - Mirroring is klunky
 - Network hotspots
 - Server admin's graduate: no archiving yet
- **Accountability: ASCAP?**

Where are we going?

**Segmenting of Internet and
Online Services companies
into a new Industry**